



DESCRIPTION OF A NEW SPECIES OF MYCETOPHILIDAE (DIPTERA)  
WITH LUMINOUS LARVAE.

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(One Text-figure.)

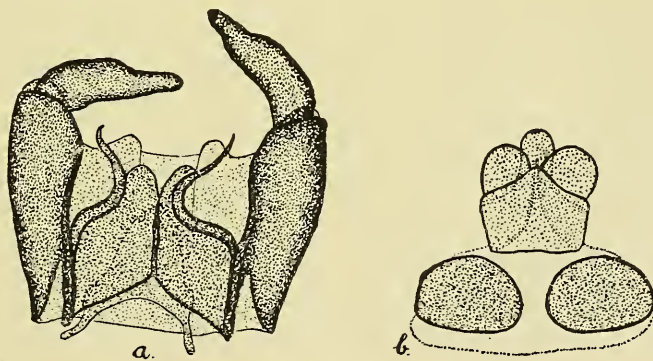
[Read 25th November, 1925.]

The occurrence of a species of Mycetophilid with luminous larvae in Tasmania does not appear to have been recorded hitherto.

The species concerned, of which a pair in copula and a single male were taken by Mr. A. M. Lea in the Ida Bay Caves, appears to belong to the same genus as that occurring in New Zealand. This latter species was described by Skuse (PROC. LINN. SOC. N.S.W., (2) v, 1890, 678) under the name of *Bolitophila luminosa*. A new genus—*Arachnocampa*—was recently erected by Edwards (*Ann. Mag. Nat. Hist.*, (9) xiv, 1924, 175) for this species. The Ida Bay specimens conform well with Edwards's description of the genus, but the species appears distinct from *A. luminosa*.

*ARACHNOCAMPA TASMANIENSIS*, n. sp.

♂. Antennae very long, longer than head and thorax together, the two basal joints small, cup-shaped, the 15 flagellar joints long, cylindrical, the first flagellar



*Arachnocampa tasmaniensis*, n. sp.

a. Dorsal view of parts seen after removal of ninth tergite.

b. Ninth tergite and anal lobes.

joint  $1\frac{1}{2}$  times as long as the second, the others decreasing progressively in length towards the apex, the 4 subterminal approximately equal in length, the terminal joint very small; scape light brown, flagellum lighter yellowish-brown at base, becoming darker after the second joint. Palpi long, incurved, the apical joint

flagelliform, yellow. Head black, with some dark hairs on occiput and face, eyes hairy. Mesonotum dark brown with an indistinct darker dorsocentral stripe on each side, these stripes bearing a double row of short hairs; median line also slightly darkened; a tuft of dark hairs above each wing root. Prothoracic ring and lateral membranous portion of thorax between mesonotum and pleurae testaceous in colour. Scutellum light brown. Pleurae dark brown. Abdomen elongate, cylindrical, the first and apical segments dark brown, the remaining segments dark brown with a broad basal yellow band. Coxae pale yellow or whitish, the anterior practically entirely so, the intermediate and hind coxae dark brown at apex; femora light yellowish-brown, the posterior pair darker, tibiae and tarsi dark brown; anterior metatarsi  $1\frac{1}{2}$  times as long as tibiae; intermediate tibiae and metatarsi subequal; posterior tibiae not quite  $1\frac{1}{2}$  times as long as metatarsi.

Wings elongate, not as long as abdomen, brownish in colour; costa extending to apex;  $R_1$  ending in costa, anterior to apex and about opposite distal end of  $M_3$ ;  $R_s$  arising anterior to end of subcostal, curved towards apex, ending in costa at extreme apex; subcostal ending in costa near middle and slightly before distal end of Cu. Halteres yellowish; clubs infuscated.

♀. Similar, thoracic lines and abdominal annulations less distinct; apical lamellae light brown.

Length 11 mm.; wings 7 mm.; antennae  $4\frac{1}{2}$  mm.

Type and allotype female in South Australian Museum; paratopotype male in collection of Dept. of Public Health, Sydney. The specimens bear the following label:—

“Ida Bay Caves, Tasmania. Arthur M. Lea, December, 1909. In total darkness fully  $\frac{1}{4}$  mile from entrance.”

The species differs from the description of *A. luminosa* Skuse to some extent in the coloration, but chiefly in the relative lengths of the fore metatarsi and tibiae.

Concerning the larvae of this species, Mr. A. M. Lea writes as follows:—“The Ida Bay glow-worm was in the caves in thousands; you saw them sparkling in crowds. They are eaten by a spider-like creature and by the *Idacarus* I named. The larvae construct a hanging affair for themselves, along which they pass; the glow is very bright, the area being about the size of the head of a London hill pin. I saw an apparently identical larva under logs in deep gullies and I am told they are often to be seen in abandoned mines.”

It would appear from this description that the habits of the cave larvae are very similar to those of the Waitomo Caves in New Zealand. The identity of the luminous larvae found in gullies and old mines is more doubtful, and it will probably be found that these belong to some species of *Ceroplatus*.

I am indebted to Dr. I. M. Mackerras for the figures of the male genitalia which were drawn from the paratype; the hairs on the segments are not shown.